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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/693,713	10/19/2000	Kunihiko Miyazaki	16869P-011500	7398	
20350	7590 01/04/2005	•	EXAM	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			HOFFMAN, E	HOFFMAN, BRANDON S	
TWO EMBARCADERO CENTER EIGHTH FLOOR		ART UNIT	PAPER NUMBER		
SAN FRANC	CISCO, CA 94111-3834	2136			
			DATE MAILED: 01/04/200	5	

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)			
Office Action Summary		09/693,713	MIYAZAKI ET AL			
		Examin r	Art Unit			
		Brandon Hoffman	2136			
Period fo	The MAILING DATE of this communication app	ears on the cover sheet with the c	orrespond nce address			
A SHI THE I Exter after If the If NO Failu Any r earne	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. Insigns of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. Period for reply specified above is less than thirty (30) days, a reply period for reply is specified above, the maximum statutory period we re to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing end patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be time within the statutory minimum of thirty (30) days will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. § 133).			
Status						
1)⊠	Responsive to communication(s) filed on 13 Se	eptember 2004.				
2a)⊠	This action is <b>FINAL</b> . 2b) This action is non-final.					
3)□	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.					
Dispositi	ion of Claims					
5)□ 6)⊠ 7)□	<u>'=</u>					
Applicati	ion Papers					
10)⊠	The specification is objected to by the Examine The drawing(s) filed on <u>13 September 2004</u> is/a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Ex	are: a)⊠ accepted or b)⊡ objec drawing(s) be held in abeyance. See ion is required if the drawing(s) is obj	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).			
Priority ι	under 35 U.S.C. § 119	•				
a)l	Acknowledgment is made of a claim for foreign  All b) Some * c) None of:  1. Certified copies of the priority document  2. Certified copies of the priority document  3. Copies of the certified copies of the priority document  application from the International Bureau  See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	on No ed in this National Stage			
Attachmen	et(s) te of References Cited (PTO-892)	4) 🗔 Interview Summary	(PTO-413)			
2) Notice 3) Information	ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) or No(s)/Mail Date	Paper No(s)/Mail Da				

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#### **DETAILED ACTION**

1. Claims 1, 2, 4-7, 9-14, 16-21, 23-30, and 34-37 are pending in this office action, claims 34-37 are newly added.

2. Applicant's arguments filed September 13, 2004, have been fully considered but they are not persuasive.

## Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

# Claim Rejections - 35 USC § 102

Claims 1, 2, 4-6, 13, 14, 16-20, 27-29, 34, and 36 are rejected under 35
 U.S.C. 102(a) as being anticipated by <u>Schneier et al.</u> (U.S. Patent No. 5,956,404).

Regarding <u>claims 1, 13, and 27, Schneier et al.</u> teaches a digital signing method/apparatus/computer program, comprising:

- A processor (col. 5, lines 22-28); and
- A storage medium (col. 5, lines 28-35);
- Wherein said processor applies a secret key to a message to generate a digital signature for the message (col. 5, lines 7-15);

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 Wherein said processor registers log data comprising the digital signature and the message with a log list in said storage medium (col. 11, lines 30-42); and

- Wherein said processor further applies the secret key to the message and
  to computed data to generate the digital signature, the computed data
  being determined based on a previously generated digital signature and on
  a previous message that are retrieved from the log list (col. 6, line 65 through
  col. 7, line 15 and col. 11, lines 30-64); and
- Wherein said processor distributes the computed data along with the generated digital signature and the message (col. 10, lines 34-37).

Regarding <u>claim 28</u>, <u>Schneier et al.</u> teaches wherein the computer readable storage medium is a computer readable medium for storing the codes (col. 5, line 26).

Regarding <u>claim 29</u>, <u>Schneier et al.</u> teaches wherein the computer readable storage medium is a computer readable medium for transmitting the codes (col. 5, line 26).

Regarding <u>claims 2 and 14</u>, <u>Schneier et al.</u> teaches wherein said message is a hash value of another message (col. 6, line 65 through col. 7, line 15).

Regarding claims 4 and 16, Schneier et al. teaches wherein:

• Said log data further comprises a distribution destination (col. 6, lines 27-29), and

Wherein said log data including a distribution destination attached thereto (col.
 11, lines 30-42).

Regarding <u>claims 5 and 17</u>, <u>Schneier et al.</u> teaches wherein registration of the log data with said log list is permitted only when the data from a previously signed message is included in the latest log data registered with said log list (col. 11, lines 45-48).

Regarding claims 6 and 18, Schneier et al. teaches

- Wherein said processor obtains a timestamp from a trusted authority, said timestamp generated by applying a second secret key to the digital signature, and a time (col. 12, lines 41-48); and
- Said processor further distributes the timestamp, along with the generated digital signature, the computed data, and the message (col. 12, lines 45-47 and fig. 3, ref. num 285).

Regarding <u>claim 19</u>, <u>Schneier et al.</u> teaches further comprising an interface configured to be connectable to a computer (col. 5, lines 24-28).

Regarding <u>claim 20</u>, <u>Schneier et al.</u> teaches:

• Wherein if a number of the log data registered with the log list exceeds a particular value, said processor outputs at least one of a plurality of log data

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registered with the log list to said computer, whereupon said computer registers said at least one of a plurality of log data with a second log list prepared in said computer (col. 11, lines 5-13), and thereupon,

 Said processor deletes said at least one of a plurality of log data from said log list in said storage medium (col. 11, lines 13-15).

Regarding <u>claims 34 and 36</u>, <u>Schneier et al.</u> teaches wherein the registering further includes registering the computed data (col. 11, lines 25-27).

### Claim Rejections - 35 USC § 103

5. <u>Claims 7, 9-12, 21, 23-26, and 30</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Schneier et al.</u> (U.S. Patent No. 5,978,475), hereinafter referred to as '475, in view of <u>Schneier et al.</u> (U.S. Patent No. 5,956,404), hereinafter referred to as '404.

Regarding <u>claims 7, 21, and 30, '475</u> teaches a digital signature verifying method/apparatus/computer program, comprising:

- A processor interconnected with an input device (fig. 1B, ref. num 110 to 180);
- Accepting a message (col. 13, lines 15-16);
- Acquiring a log list of a digital signer (col. 13, lines 17-22); and
- Checking whether log data of said digital-signature-attached message is registered in said log list (col. 13, lines 23-33),

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- And if the log data is registered in the log list, authenticating that the digitalsignature-attached message was distributed by the digital signer (col. 13, line 65 through col. 14, line 1),
- Wherein said processor authenticates whether the digital signature included in said digital-signature-attached message has been generated for the message included in the digital-signature-attached message, using the digital signature and the message included in said digital-signature-attached message and a public key paired with a secret key of said digital signer (col. 15, lines 1-8).

'475 does not specifically teach the accepting is of a digital-signature-attached message, wherein said digital-signature-attached message may have been distributed by said digital signer is to be verified.

'404 teaches accepting a digital-signature-attached message (col. 5, lines 35-41), wherein said digital-signature-attached message may have been distributed by said digital signer is to be verified (col. 11, lines 45-48).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine accepting a digital-signature-attached message, wherein said digital-signature-attached message may have been distributed by said digital signer is to be verified, as taught by '404, with the method/apparatus/computer

program of <u>'475</u>. It would have been obvious for such modifications because a digital-signature-attached message provides a strong audit trail; a strong audit trail provides an indisputable list of actions to verify all events that took place.

Regarding claims 9 and 23, the combination of 475 in view of 404 teaches:

- Wherein said digital-signature-attached message further comprises data from a previously signed message (see col. 11, lines 30-64 of '404),
- Said method further comprising checking whether the digital signature included in the digital-signature-attached message has been generated for the message included in the digital-signature-attached message, using the digital signature, the data from a previously signed message, and the message included in said digital-signature-attached message and a public key paired with a secret key of said digital signer (see col. 15, lines 12-15 of '475).

Regarding <u>claims 10 and 24</u>, the combination of <u>'475</u> in view of <u>'404</u> teaches said method further comprising checking whether data from a previously signed message included in said digital-signature-attached message is included in the log data registered immediately before log data of said digital-signature-attached message in said log list, and if the data from a previously signed message is included in the immediately previous registered log data, authenticating that said log list has not been altered (see col. 11, lines 45-48 of '404).

Regarding claims 11 and 25, the combination of '475 in view of '404 teaches:

- Wherein said log data further comprises a distribution destination (see col. 6, lines 27-29 of '404),
- Said method further comprising acquiring a digital-signature-attached message
  from the distribution destination attached to the log data registered immediately
  before/after the log data of said digital-signature-attached message in said log list
  (see col. 11, lines 30-42 of '404), and
- Checking whether the acquired message is included in said immediately
  previous/subsequent registered log data, and if the message is included,
  authenticating that said log list has not been altered (see col. 11, lines 44-50 of
  '404).

Regarding claims 12 and 26, the combination of 475 in view of 404 teaches:

- Wherein said digital-signature-attached message further comprises a timestamp created using a second secret key (see col. 12, lines 41-48 of '404),
- Said method further comprising acquiring a digital signature and a time data by applying a public key paired with said second secret key to the timestamp included in said digital-signature-attached message (see col. 12, line 65 through col. 13, line 1 of '404); and
- Checking whether date and time indicated by the acquired time data exceeds a
  date and time of signing of said digital-signature-attached message (see col. 12,
  lines 49-59 of '404),

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 And if the date and time indicated by the time data does not exceed the date and time of signing of said digital-signature-attached message, authenticating the validity of the acquired digital signature (see col. 12, line 59-65 of '404).

Regarding <u>claims 35 and 37</u>, the combination of <u>'475</u> in view of <u>'404</u> teaches wherein the digital-signature-attached message that is registered in the log list includes data based on a previously generated digital signature and on a previous message (see col. 6, line 65 through col. 7, line 15 of '404).

#### Conclusion

- 6. Applicant amends claims 1, 4, 5, 7, 13, 16-18, 21, 27, and 30, and cancels claims 3, 8, 15, 22, and 31-33.
- 7. Applicant argues Schneier et al. does not contain signature data as claimed in the instant application because Schneier et al. appends chain data <u>before</u> generating a signature (page 17, third paragraph). Also, Schneier et al. does not show how to verify the audit trail using previous signatures (page 17, last paragraph).

Regarding applicant's argument, examiner disagrees with applicant. Applicant is referred to column 7, lines 7-15 and figure 5. This shows that even though only the most prior signed signature is stored, ANY prior signed signature can be found by tracing back through the previous signatures. Therefore, any of the previous signatures can be verified, not just the most prior one. The data is shown as being appended

before the generation of the signature; however, the appended data has already been signed in previous signatures. The new signature now appends the previous signatures to include them into the new signature. This creates a chain of signatures that prevent an attacker from altering any previous signatures.

#### Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ВН

Branda Haff